

**WHAT IS CLAIMED IS:**

1. A method to determine a configuration of at least a portion of a network,  
the method comprising:

receiving status information relating to nodes in the portion of the

5 network;

determining, for the nodes, respective labels that indicate one or more  
virtual connections traversing the nodes based on the status information;

identifying at least one link between a subset of the nodes based on the  
respective labels; and

10 determining the configuration of the portion of the network based on the  
at least one link.

2. The method of claim 1, wherein receiving status information comprises:  
receiving management information base parameters from the nodes.

15 3. The method of claim 2, wherein receiving the management information  
base parameters comprises receiving a virtual path identifier for each of the one or  
more virtual connections.

20 4. The method of claim 2, wherein receiving the management information  
base parameters comprises receiving virtual channel identifier information for each of  
the one or more virtual connections.

5. The method of claim 1, wherein determining respective labels that indicate one or more virtual connections traversing the nodes comprises determining one or more identifiers for each of the one or more virtual connections.

5 6. The method of claim 5, wherein determining at least one link between the subset of the nodes comprises determining the subset of nodes having the same one or more identifiers.

7. The method of claim 5, wherein determining one or more identifiers comprises determining a virtual path identifier for each of the one or more virtual connections.

8. The method of claim 7, wherein determining one or more identifiers comprises determining a virtual channel identifier for each of the one or more virtual connections.

9. The method of claim 1, wherein determining respective labels that indicate one or more virtual connections traversing the nodes comprises:

determining a number of the virtual connections traversing the nodes;

20 and

determining respective cardinalities of the nodes based on the number of the virtual connections.

10. The method of claim 9, wherein determining at least one link between the subset of the nodes comprises determining the subset of nodes having the same cardinality.

5 11. The method of claim 10, further comprising receiving additional status information when the subset of nodes exceeds a threshold number of nodes.

12. The method of claim 11, wherein the threshold number of nodes is 2.

13. An apparatus, comprising:

means for receiving status information relating to nodes in at least a portion of a network;

means for determining respective labels for the nodes that indicate one or more virtual connections traversing the nodes based on the status information;

15 means for identifying at least one link between a subset of the nodes based on the respective labels; and

means for determining a configuration of the portion of the network based on the at least one link.

20 14. The apparatus of claim 13, wherein the means for receiving status information comprises:

means for receiving management information base parameters relating to the plurality of nodes.

15. The apparatus of claim 14, wherein the means for receiving the management information base parameters comprises means for receiving virtual path identifier for each of the one or more virtual connections.

5 16. The apparatus of claim 14, wherein the means for receiving the management information base parameters comprises means for receiving virtual channel identifier information for each of the one or more virtual connections.

10 17. The apparatus of claim 13, wherein the means for determining respective labels that indicate one or more virtual connections traversing the nodes comprises means for determining one or more identifiers for each of the one or more virtual connections.

15 18. The apparatus of claim 17, wherein the means for determining at least one link between the subset of the nodes comprises means for determining the subset of nodes having the same one or more identifiers.

20 19. The apparatus of claim 17, wherein the means for determining one or more identifiers comprises means for determining a virtual path identifier for each of the one or more virtual connections.

25 20. The apparatus of claim 17, wherein the means for determining one or more identifiers comprises means for determining a virtual channel identifier for each of the one or more virtual connections.

21. The apparatus of claim 13, wherein the means for determining respective labels that indicate one or more virtual connections traversing the nodes comprises:

- means for determining a number of the virtual connections traversing the
- 5 nodes; and
- means for determining respective cardinalities of the nodes based on the number of the virtual connections.

22. The apparatus of claim 21, wherein the means for determining at least one link between the subset of the nodes comprises means for determining the subset of nodes having the same cardinality

23. The apparatus of claim 22, further comprising means for receiving additional status information when the subset of nodes exceeds a threshold number of

15 nodes.

24. The apparatus of claim 23, wherein the threshold number of nodes is 2.

25. A method for determining a configuration of a node in a network, the

20 method comprising:

- receiving status information relating to the node and at least one additional node in the network;
- determining respective labels that indicate one or more virtual connections traversing the node based on the status information;

identifying at least one link between the node and the at least one additional node based on the respective labels; and

determining a configuration of the node based on the at least one link.

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26. An apparatus, comprising:

means for receiving status information relating to a node in a network and at least one additional node in the network;

means for determining respective labels that indicate one or more virtual connections traversing the node based on the status information;

means for identifying at least one link between the node and the at least one additional node based on the respective labels; and

means for determining a configuration of the node based on the at least one link.